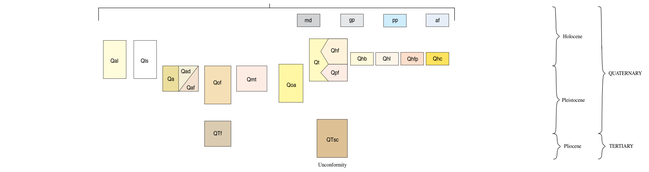
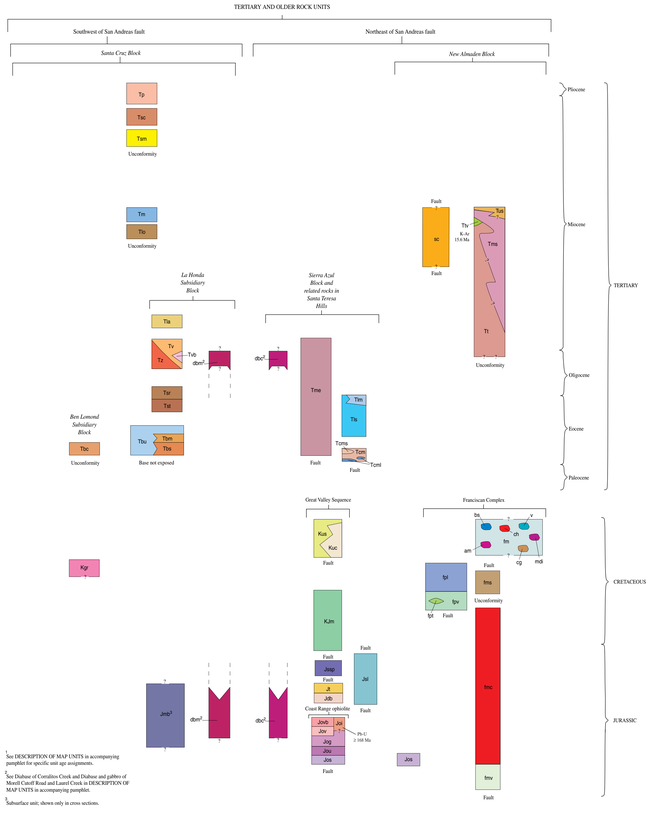
CORRELATION OF MAP UNITS

QUATERNARY TO LATE TERTIARY UNITS[1]



TERTIARY AND OLDER ROCK UNITS



[1] See DESCRIPTION OF MAP UNITS in accompanying pamphlet for specific unit age assignments.

[2] See Diabase of Coralitos Creek and Diabase and gabbro of Morrell Cutoff Road and Laurel Creek in DESCRIPTION OF MAP UNITS in accompanying pamphlet.

[3] Subsurface unit; shown only in cross sections.

LIST OF MAP UNITS

[See pamphlet for Description of Map Units. Some unit exposures on the plotted maps are too small to distinguish the color for unit identification. These units are labeled where possible, and unlabeled units are attributed in the database]

QUATERNARY TO LATE TERTIARY UNITS

- md — **Mine dump (Holocene)**
- gp — **Gravel pit (Holocene)**
- pp — **Percolation pond (Holocene)**
- af — **Artificial fill (Holocene)**
- Qal — **Alluvium, undivided (Holocene and Pleistocene)**
- Qls — **Landslide deposits, undivided (Holocene and Pleistocene)**
- Qt — **Alluvial terrace deposits, undivided (Holocene and Pleistocene)**
- Qhf — **Alluvial fan deposits (Holocene)**
- Qhb — **Basin deposits (Holocene)**
- Qhl — **Levee deposits (Holocene)**
- Qhfp — **Floodplain deposits (Holocene)**
- Qhc — **Stream channel deposits (Holocene)**
- Qa — **Aromas Sand (Pleistocene)**—Locally divided into:
  - Qad — **Dune deposits**
  - Qal — **Fluvial deposits**
- Qof — **Old floodplain deposits (Pleistocene?)**
- Qmt — **Marine terrace deposits (Pleistocene)**
- Qoa — **Old alluvium, undivided (Pleistocene)**
- Qpf — **Alluvial fan deposits (Pleistocene)**
- QTf — **Fluvial deposits, undivided (Pleistocene and Pliocene?)**
- QTsc — **Santa Clara Formation (Pleistocene and Pliocene)**

TERTIARY AND OLDER ROCK UNITS
Northeast of San Andreas fault
New Almaden Block

- sc — **Silica-carbonate rock (Miocene?)**
- Tus — **Unnamed sandstone (middle Miocene or younger)**
- Tms — **Monterey Shale (middle and lower Miocene)**
- Tti — **Temblor Sandstone (middle Miocene to Oligocene?)**—Locally includes:
- Ttv — **Volcanic and intrusive rocks (middle Miocene)**
- Jos — **Serpentinized ultramafic rocks (Jurassic)**

Franciscan Complex (Cretaceous and Jurassic)—Consists of:

- fm — **Melange of the Central belt (Upper Cretaceous)**—Includes:
- bs — **Blueschist blocks**
- am — **Amphibolite blocks**
- ch — **Chert blocks**
- v — **Basaltic volcanic rock blocks**
- cg — **Conglomerate block**
- mcd — **Metadiorite block**

Permanente terrane (Cretaceous)—Divided into:

- fpf — **Foraminiferal limestone (Upper and Lower Cretaceous)**
- fpv — **Volcanic rocks (Lower Cretaceous)**
- fpt — **Siliceous radiolarian-bearing tuff**

Marin Headlands terrane (Cretaceous and Jurassic)—Divided into:

- fmg — **Sandstone (Upper and (or) Lower Cretaceous)**
- fmc — **Radiolarian chert (Lower Cretaceous and Jurassic)**
- fmv — **Basaltic volcanic rocks (Lower Jurassic)**

Sierra Azul Block and related rocks in Santa Teresa Hills

- Tme — **Shale and sandstone of Highland Way (lower Miocene to lower Eocene)**

Sandstone and shale of Loma Chiquita Ridge (Eocene)—Consists of:

- Tlm — **Siliceous mudstone**
- Tla — **Sandstone and mudstone**
- Tcm — **Mottled mudstone and sandstone of Mount Chual (lower Eocene)**—Locally includes:
- Tcms — **Sandstone lenses**
- Tcml — **Limestone**

Great Valley Sequence (Cretaceous and Jurassic)—Consists of:

- Kus — **Sandstone and shale (Upper Cretaceous)**
- Kuc — **Conglomerate (Upper Cretaceous)**
- KJm — **Mudstone (Lower Cretaceous and Upper Jurassic)**
- Jssp — **Sedimentary serpentinite (Upper Jurassic)**
- Jtl — **Altered tuff of Mount Umunhum (Jurassic?)**
- Jdb — **Diabase breccia of Mount Umunhum (Jurassic?)**

Coast Range Ophiolite (Jurassic)—Consists of:

- Jovb — **Quartz-keratophyre breccia and siliceous tuff (Upper and Middle Jurassic)**
- Jov — **Basalt, andesite, and dacite (Middle Jurassic or older)**
- Jol — **Intrusive complex (Jurassic)**
- Jog — **Gabbro cumulates (Jurassic)**
- Jou — **Ultramafic cumulates (Jurassic)**
- Jos — **Serpentinized ultramafic rocks (Jurassic)**
- Jsl — **Slate of Loma Prieta Peak (Jurassic?)**
- dbc — **Diabase of Corralitos Creek (lower Miocene or Jurassic)**

Southwest of San Andreas fault
Santa Cruz Block

- Tp — **Purisima Formation (Pliocene and upper Miocene)**
- Tsc — **Santa Cruz Mudstone (upper Miocene)**
- Tsm — **Santa Margarita Sandstone (upper Miocene)**
- Tm — **Monterey Formation (middle Miocene)**
- Tlo — **Lompico Sandstone (middle and lower Miocene)**

La Honda and Ben Lomond Subsidiary Blocks

- Tla — **Lambert Shale (lower Miocene)**
- Tv — **Vaqueros Formation (lower Miocene and Oligocene)**—Locally includes:
- Tvb — **Basalt flows (upper Oligocene)**
- Tz — **Zayante Sandstone (lower Miocene and Oligocene)**

San Lorenzo Formation (Oligocene and Eocene)—Consists of:

- Tsr — **Rices Mudstone Member (Oligocene and late Eocene)**
- Tst — **Twobar Shale Member (late Eocene)**

Butano Sandstone (Eocene)—Consists of:

- Tbu — **Undivided sandstone and shale (late to middle Eocene)**
- Tbm — **Mudstone (late Eocene)**
- Tbs — **Sandstone (middle Eocene or younger)**
- Tbc — **Conglomerate (middle Eocene or younger)**
- Kgr — **Granitic and metamorphic rocks (Cretaceous and older)**
- Jmb — **Mafic basement rocks (Jurassic)**—shown only on structure sections
- dbm — **Diabase and gabbro of Morrell Cutoff Road and Laurel Creek (lower Miocene or Jurassic)**

EXPLANATION

[See database for structural detail that is not shown clearly on printed maps]

- **Contact**—Dashed where approximate, dotted where concealed, queried where uncertain
- **Fault**—Dashed where approximate, dotted where concealed, queried where uncertain. U and D denote upthrown and downthrown blocks. Arrows with (without) numbers denote fault dip (or dip direction). Bar and ball locally denote downthrown block. Horizontal arrows denote relative horizontal movement. Double barb denotes vertical fault
- **Attenuation fault**—Fault at low angle to bedding, interpreted as low-angle normal fault, double hachures on down-dropped (upper plate) side. Dashed where approximate, dotted where concealed, queried where uncertain
- **Thrust fault**—Barbs on upper plate. Dashed where approximate, dotted where concealed, queried where uncertain
- **Principal trace of the San Andreas fault**—Dashed where approximate, dotted where concealed
- **Crack, 10/17/89**—Surface crack that occurred during the Loma Prieta earthquake of October 17, 1989. U and D denote upthrown and downthrown blocks. Arrow and number denote dip. Bar and ball locally denote downthrown block
- **Glauconitic marker**
- **Conglomeratic marker**
- **Photo lineament**
- **Marker bed**

Strike and dip of bedding

- **Inclined**—Ball denotes that facing direction is known from sedimentary structures; no dip means dip unknown
- **Vertical**—Ball denotes that facing direction is known from sedimentary structures
- **Horizontal**
- **Overturned**—Ball denotes that facing direction is known from sedimentary structures
- **Approximate**—Based on photo interpretation or estimated dip in field
- **In trench**—Measured from exposures at geotechnical or construction trench site
- **Strike and dip of volcanic flow or of dikes and sills**—Ball denotes that facing direction of flow is known from sedimentary or volcanic structures
- **Inclined**
- **Vertical**

Shear foliation or cleavage

- **Inclined**
- **Vertical**
- **Joint**
- **Lineation direction**—Showing rake

Folds—Dashed where approximate, dotted where concealed, queried where uncertain

- **Synclinal axis**—Showing direction of plunge
- **Anticlinal axis**—Showing direction of plunge
- **Overturned syncline**
- **Overturned anticline**
- **Antiformal axis**
- **Outcrop-scale syncline**—Showing plunge
- **Outcrop-scale anticline**
- **Outcrop-scale anticline**—Showing plunge
- **Outcrop-scale complex folds**
- **Outcrop-scale complex folds**—Showing plunge
- **Outcrop-scale folds**—Showing plunge and dip of axial plane
- **Outcrop-scale complex folds**—Showing dip of axial plane
- **Outcrop-scale complex folds**—Showing plunge and dip of axial plane
- **Oil drill hole surface location**
- **Subsurface course of abandoned railroad tunnel southwest of Wright**
- **Earthquake mainshock epicenter**—October 17, 1989 Loma Prieta earthquake. Located in southeastern Laurel quadrangle. Focal depth was 17 km (see text discussion)
- **Locations of structure sections shown on geologic maps**
- **Mine adit**
- **Mine shaft**
- **Oil seep**
- **Quarry**
- **Trench site**—shown locally
- **Area of hydrothermal alteration**
- **Landslide**—Arrows indicate direction of movement
- **Rotational block-style landslide**—Arrows indicate direction of movement, hachured line indicates block boundary
- **Rotational block-style landslide**—Showing coherent unit mapped within landslide block
- **Sag pond**

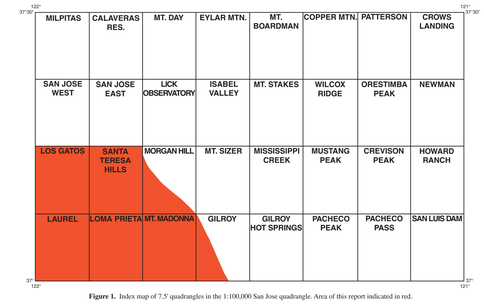


Figure 1. Index map of 7.5' quadrangles in the 1:100,000 San Jose quadrangle. Area of this report indicated in red.

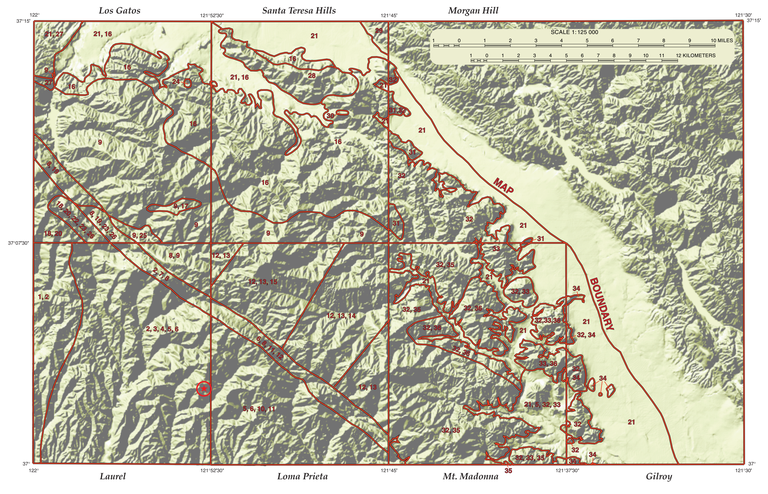


Figure 2A. Index to sources of geology, southwestern Santa Clara Valley and southern Santa Cruz Mountains. Numbers are keyed to reference list (fig. 2B).

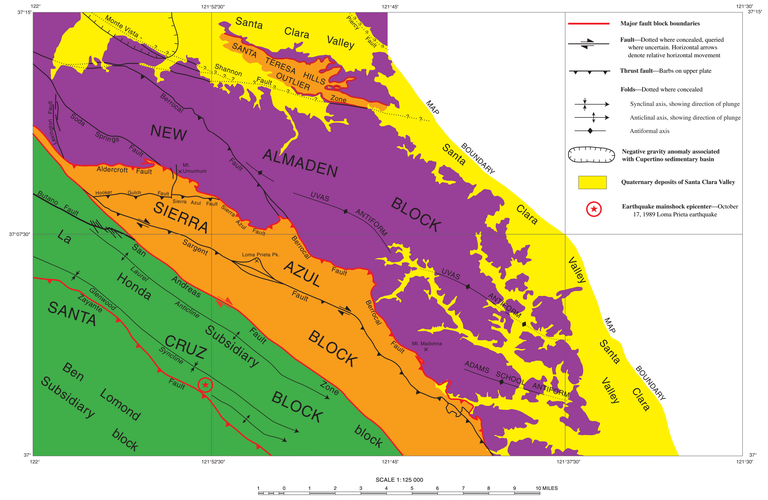


Figure 3. Major fault blocks of the southwestern Santa Clara Valley and southern Santa Cruz Mountains. Stratigraphy of fault blocks is discussed in map text and in rock descriptions.

Figure 2B. References to sources of data used in compilation (see fig. 2A).

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GEOLOGIC MAPS AND STRUCTURE SECTIONS OF THE SOUTHWESTERN SANTA CLARA VALLEY AND SOUTHERN SANTA CRUZ MOUNTAINS, SANTA CLARA AND SANTA CRUZ COUNTIES, CALIFORNIA

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